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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,238	02/01/2001	Ian B. Maclean	NRT.0090US	8146
21906 7590 08/07/2007 TROP PRUNER & HU, PC 1616 S. VOSS ROAD, SUITE 750 HOUSTON, TX 77057-2631			EXAMINER RYMAN, DANIEL J	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 08/07/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/775,238

Applicant(s)

MACLEAN, IAN B.

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-7, 10, 12-21, 23-25 and 27-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-7, 10, 12-21, 23-25 and 27-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Response, filed 10 July 2007, with respect to the rejection(s) of claim(s) 3-7, 10, 12-21, 23-25, and 27-33 under Forslow (USPN 6,608,832) and Inoue et al. (USPN 6,515,974) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the 3G' TS 29.060 V3.2.2 (1999-12) Specification, entitled "GPRS Tunnelling Protocol (GTP) across the Gn and Gp Interface".

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-7, 10, 12-21, 23-25, and 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lager et al. (USPN 6,636,502), of record, in view of 3G TS 29.060 V3.2.2 (1999-12) Specification, entitled "GPRS Tunnelling Protocol (GTP) across the Gn and Gp Interface" (hereafter referred to as "3G Specification") in further view of Rao (USPN 6,535,511), of record.

4. Regarding claims 3-5, 10, 18, 19, 24, and 25, Lager discloses a first Internet Protocol (IP) packet having a payload portion containing a General packet radio service Tunneling Protocol (GTP) data unit (Lager: col. 3, lines 26-29, where the SGSN and the GGSN are connected using an IP network, such that any packet transmitted over this connection will be an IP packet; and

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Lager: Fig. 6 and col. 6, lines 30-34 and 52-60, where the SGSN sends the GGSN a "Create PDP Context Request" message, ref. S3', over the IP link to initiate a tunnel between the SGSN and the GGSN, i.e. a "GTP data unit" in the payload portion of the IP packet; see also Specification: p. 10, lines 21-30, which defines the PDP Context Create Request as a GTP packet). Lager further discloses that the first IP packet contains a private network address of a first GPRS support node in the first wireless network (Lager: col. 4, lines 24-32, where the SGSN resides on a private IP network, such that the IP packet will contain a private network address of the SGSN in the first wireless network, i.e. PLMN).

Lager does not expressly disclose that the first IP packet has a header containing a private network address of a first GPRS support node in the first wireless network and a GTP data unit in the payload portion containing the private network address of the first GPRS support node. However, the 3G Specification dictates that the Create PDP Context Request will have a header containing a network address of a first GPRS support node in the first wireless network and a GTP data unit in the payload portion containing the network address of the first GPRS support node (3G Specification: pp. 53 and 54, where the GTP signaling messages are carried over IP; p. 55, where the header of the IP packets contain the source address of the originating GSN node, i.e. a first GPRS support node; p. 16, where the Create PDP Context Request, i.e. a GTP signaling message, contains the SGSN address for signaling purposes and where this address may be the same as the address in the header; and pp. 17 and 52, where this address is an IP address). As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the first IP packet have a header containing a private network address of a first GPRS support node in the first wireless network, and a GTP data unit in the payload portion of

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the first IP packet containing the private network address of the first GPRS support node in order to increase the industrial applicability of Lager's system by having the Create PDP Context Request message of Lager comply with the requirements of the 3G Specification.

Lager in view of the 3G Specification does not expressly disclose translating, by a network address translator executed on one or more microprocessors, the private network address in each of the header and payload portion to a public network address; and sending by the network address translator executed on the one or more microprocessors, a second IP packet having a header and payload portion to a second GPRS support node in the second wireless network, each of the header and payload portion of the second IP packet containing the public network address translated from the private network address. However, Lager does disclose that the SGSN and the GGSN reside on private networks and that the IP network interconnecting the SGSN and the GGSN is a public network (Lager: col. 4, lines 24-41). Lager further discloses that a border gateway is used to interface the private and the public networks (Lager: col. 4, lines 24-41). Rao teaches, in a system for connecting private networks to public networks, that network address translation is required to pair up private IP addresses and public IP addresses to enable a packet originating on a private network to be transmitted across a public network (Rao: col. 1, lines 25-35). Rao further discloses that addressing information embedded in message payload data must also be translated (col. 1, lines 45-48). As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to translate, by a network address translator executed on one or more microprocessors in Lager's border gateway, the private network address in each of the header and payload portion of the Create PDP Context Request message of Lager, to a public network address, as taught by Rao, and to send by the network address translator

executed on the one or more microprocessors, a second IP packet having a header and payload portion to a second GPRS support node in the second wireless network, each of the header and payload portion of the second IP packet containing the public network address translated from the private network address. It would have been obvious to one of ordinary skill in the art at the time of the invention to do this to ensure that the SGSN address for signaling contained in the Create PDP Context Request message is properly translated to a public address so that the GGSN can use the public address to send a signaling message to the SGSN.

5. Regarding claim 6, Lager in view of the 3G Specification in further view of Rao discloses that receiving the first IP packet containing the private network address of the first GPRS support node comprises receiving the first IP packet containing the private network address of a Serving GPRS Support Node, and wherein sending the second IP packet to the second GPRS support node comprises sending the second IP packet to a Gateway GPRS Support Node (Lager: Fig. 6, where the Create PDP Context Request message is sent from an SGSN to a GGSN).

6. Regarding claim 7, Lager in view of the 3G Specification in further view of Rao discloses determining whether to establish a data session on a packet data network on behalf of a roaming mobile station through the first wireless network or the second wireless network (Lager: col. 3, lines 9-25, where the SGSNs track new mobile stations in their area and determine whether the mobile station is permitted to join the network).

7. Regarding claim 12, 27, and 28, Lager in view of the 3G Specification in further view of Rao discloses that translating the private network address in the payload portion of the data packet is performed by identifying a string in the payload portion containing the private network

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address (Rao: col. 4, lines 60-67, where a table is used “to identify application specific embedded addressing information in IP packets,” see also col. 4, lines 9-19).

8. Regarding claims 13 and 23, Lager in view of the 3G Specification in further view of Rao discloses that the first packet has a payload portion containing a General Packet Radio Service Tunneling Protocol (GTP) data (3G Specification: pp. 53 and 54, where the GTP signaling messages are carried over IP; see also Specification: p. 10, lines 21-30, which defines the PDP Context Create Request as a GTP packet), the GTP data containing the private network address (Lager: col. 4, lines 24-32, where the SGSN and the GGSN reside on private IP networks, such that the IP packet will contain a private network address of the SGSN in the first wireless network, i.e. PLMN, and 3G Specification: p. 16, where the Create PDP Context Request, i.e. a GTP signaling message, contains the SGSN address for signaling purposes and where this address may be the same as the address in the header).

9. Regarding claim 14, Lager in view of the 3G Specification in further view of Rao discloses receiving the first packet from a Serving General packet radio service Support Node (SGSN) in the first wireless network, the first node comprising the General Packet Radio Service support node (Lager: Fig. 6, where the Create PDP Context Request message originates at an SGSN and is destined for a GGSN).

10. Regarding claim 15, Lager in view of the 3G Specification in further view of Rao discloses sending the second packet to a GGSN in a second wireless network, the second node comprising the GGSN (Lager: Fig. 6, where the Create PDP Context Request message originates at an SGSN and is destined for a GGSN).

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11. Regarding claim 16, Lager in view of the 3G Specification in further view of Rao discloses receiving the first packet from the SGSN associated with a first public land mobile network (PLMN) and sending the second packet to the GGSN associated with a second PLMN (Lager: Figs. 2 and 3 and col. 4, lines 24-41).

12. Regarding claims 17 and 20, Lager in view of the 3G Specification in further view of Rao discloses that the first wireless network is associated with a first network operator and the second wireless network is associated with a second network operator (Lager: col. 4, lines 24-41, where the private networks are corporate networks and the public network is the Internet, and where the networks are on different PLMNs).

13. Regarding claim 21, Lager in view of the 3G Specification in further view of Rao discloses that the interface is adapted to receive the data packet comprising an Internet Protocol packet (Lager: col. 3, lines 26-29, where the packets are sent over an IP network; see also 3G Specification: p. 54).

14. Regarding claims 29-33, Lager in view of the 3G Specification in further view of Rao discloses that receiving the first data packet comprises receiving the first data packet having the payload portion that contains a Packet Data Protocol (PDP) Context Create request, the PDP Context Create request containing the private network address of the first node (Lager: Fig. 6, see also 3G Specification: p. 16).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00am-4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel J. Ryman
Examiner
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